FINAL REPORT

SUSTAINABILITY STRATEGIES FOR COMMUNITY TECHNOLOGY CENTERS IN SEATTLE

Prepared for
The City of Seattle
Department of Information Technology
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By

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This report is also available on the web at www.cityofseattle.net/tech/reports.

EXECUTIVE SUMMARY

This project profiles different models for Community Technology Center (CTC) sustainability, based on our direct observation of plans and operations at a variety of CTCs throughout Seattle. For the purposes of this project, "sustainability" is defined as ***the long-term ability of CTCs to maintain or improve their capacity to deliver services***. Packed into this view of sustainability are requirements of financial stability in the face of changing digital technology, continued demand from community members for the services the CTC can provide, and the management capacity to respond to community needs by delivering quality services.

With guidance from the Citizens' Telecommunications and Technology Advisory Board (CTTAB) and the City's Department of Information Technology, this work has focused on two main research questions:

- What are operational elements common to all CTCs, and strategies that will help place (and keep) CTCs on a path to sustainable operations?
- Since Centers vary in size, structure, affiliation, and overall mission, how can strategies that work at one CTC be successfully applied by others?

Primary data collection involved a "tiered" approach – we conducted initial interviews with 25 Community Technology Centers, which we followed with a more in-depth look at 15 of these centers, and held a focus group discussion with representatives invited from the centers that we did not look at further.

Each CTC is organized in a distinctive way, the result of history, sponsorship, and the users it serves. Despite this variability, however, a number of operational elements are common to all CTCs. A functioning CTC, to be on a path towards sustainable access and training services, will have these elements:

- Management and Administration (which includes staffing, volunteer coordination, business planning, technology planning, evaluation and reporting)
- Programming and Curriculum Development
- Fundraising and Resource Development
- Partnerships (which serve to extend or substitute for in-house staffing, volunteers, training resources, financial and material contributions, space sharing)
- Networking and Potential Resource Sharing
- Facilities and Equipment (which cover space and furnishings, disability accommodations, operating hours and other access issues, hardware, software, other instructional equipment)
- Outreach, Participant Recruitment, and Community Involvement

The report highlights some of the key operational challenges in each of these areas, along with strategies and practices that help meet these challenges.

MANAGEMENT AND ADMINISTRATION

- **Coordinator has key role**: A CTC's operational success depends on having a technically competent, adequately paid Coordinator. No single job description captures the range of responsibilities a Coordinator might have in different settings. However, the more involved in direct services the Coordinator is, the more responsibility falls on the sponsoring organization's executive director to support strategic planning, fund-raising, and recruiting volunteers.
- **Look for instructor versatility**: Instructors are most successful when they have attributes beyond the instrumental skills that support technology training, including knowledge of and sensitivity to the cultural backgrounds of their trainees and familiarity with an extended network of community resources that support other dimensions of their trainees' lives.
- **Plan for tech support**: Technical support is an unglamorous but essential factor in sustained service delivery. Key to suitable technical support is preventive maintenance, having support available when it is needed, adequate funding for regular support (as exclusive reliance on volunteers for tech support rarely proves dependable), and clear documentation of equipment configurations to make trouble-shooting more manageable.
- **Support your volunteers**: Volunteers extend the CTC's resources. Recruitment, supervision, and retention require the attention of someone familiar with the CTC's day-to-day operating requirements.
- **Tracking is a useful planning tool**: Tracking CTC use for reporting purposes is not just a requirement imposed by funders; it is useful for monitoring ongoing operations, helps evaluate users' needs and future programming, and serves as evidence of the good work the CTC has accomplished.

PROGRAMMING AND CURRICULUM DEVELOPMENT

- **Training is a higher priority than just access**: "Instruction" and "classes" are favored over open access as the preferred use of space. This is consistent with the renewed emphasis on digital technology as a tool that can be used to help individuals and families achieve specific skill development and communication objectives.
- **Flexibility Matters**: Successful centers have learned to be flexible and creative in their program development to suit users' needs (making classes run for extended periods of time, dropping structured classes for "workshops" or individualized instruction).
- **Focus on meaningful content**: Design and offer programs that will hook potential students' attention or address real needs. Examples include brochure production, using the web to understand your doctor, or building a snappy resume.

FUNDRAISING AND RESOURCE DEVELOPMENT

- **Wide participation complements leadership grants**: While most CTCs have multiple sources of support, successful CTCs usually have a limited number of especially generous sources that have made a significant difference. For sustainability's sake, however, widespread participation in resource development is just as important as landing that single big grant.

PARTNERSHIPS

- **Extend or substitute for staffing, training, financial contributions and space sharing**: Most CTCs establish partnerships with entities other than CTCs to exchange both resources and information.

NETWORKING AND POTENTIAL RESOURCE SHARING AMONG CTCS

- **Sharing can be worth it**: Financial resource limitations can be mitigated (potentially) by sharing volunteer recruitment efforts, fund-raising, curriculum development, and access to discounted volume purchases.
- **Information exchange opportunities are needed**: More opportunities for exchange of specific information would help increase the awareness of successful operating strategies and effective approaches to fund-raising and volunteer recruitment.

FACILITIES AND EQUIPMENT

- **Access and visibility vs. security tradeoffs**: CTCs are generally in accessible locations, but a tradeoff must be struck between making them visible and attractive to casual drop-in traffic on the one hand, and making sure they do not become inviting targets for theft, vandalism, and other security hazards.
- **Upgrades – the never-ending quest**: Initially, facilities and equipment have been the easiest to fund. However, it is a never-ending quest to keep up with new technology as it becomes available. CTCs have developed technology plans that address long-term needs, and are careful to make sure that their programs and services drive their determination of hardware / software needs, rather than upgrading just to have the latest versions available. Budget planning must properly anticipate upgrade and replacement cycles.

OUTREACH, PARTICIPANT RECRUITMENT, AND COMMUNITY INVOLVEMENT

- **Anticipate changes in demand**: While many CTCs in Seattle are not being used to their full capacity, some have waiting lists. To reach and maintain adequate use rates, CTCs must demonstrate a willingness to make changes in program offerings, offer flexible operating hours, and pay specific attention to forms of outreach that target user populations will respond to.
- **Develop a marketing plan and implement it**: CTCs are most effective in reaching potential users when they design programs with their target audiences in mind, determine how best to reach them and invest in making sure they get the word.

These strategies generally are combined in an "opportunistic" approach, where (as one Center manager put it) individual CTCs "scratch and get by." In the face of more limited future resources, concern is focused on whether individual centers "scratching and getting by" will result in continued access to digital technology and training for the folks who need it most.

We suggest that sustainability on a metropolitan scale requires CTCs, their funders, and other partners to build on the resources already in place, and to think strategically about opportunities to join forces. Working together can reduce the fixed costs associated with CTC operations and may also be attractive to funders who are looking for more systemic solutions, and who may also feel they can benefit from reduced administrative obligations. The challenge is to think about how CTCs might work together without compromising their individual ability to adapt their operations to the needs of those who form their core constituencies. As a first step in tackling this challenge, this report presents four different conceptual models of sustained service delivery and public access that involve varying degrees of pooling resources. The models are intended to spark a conversation among the City, CTC managers, and funders about the implications for CTC sustainability within the following organizational models:

Pure Enterprise Model: Individual centers operating independently, sustaining themselves through user fees for access, training services, use of space by third parties, and other revenue generating services.

Pure Service Model: Individual centers operating independently, sustaining themselves through fund-raising efforts (can be annual fund or capital campaigns/endowment-building efforts) so that users receive a 100% subsidy of costs for access and training.

"Affinity Group" Model: Small clusters of 3-6 centers (clusters can be based on local geography or similar service populations). The individual centers in an "affinity group" deliver services, do some outreach and fund-raising on their own, but rely on a central umbrella organization for major fund-raising, purchasing, volunteer recruitment, technical assistance, and public education.

"Association" Model: A larger voluntary association, perhaps encompassing many CTCs throughout a metropolitan area, which emphasizes building access- and service-

related brand identity; centralized assistance for training, volunteer recruitment, smaller "affinity groups" of managers to assure consistent record-keeping; smaller "affinity groups" may be encouraged within the Association, based on similarity of more encompassing mission for organizational operators; allows a group of corporate sponsors to band together to support one set of centers and identify more closely with outcomes.

Regardless of which model of collaboration emerges as most suitable for Seattle area CTCs, there is a need for information sharing that CTC coordinators would like to see better met. Some of this sharing could be done easily via a list-serv or discussion group, but many people expressed an interest in regular meetings to share information about hardware and software purchases, marketing and outreach strategies, programs that are particularly successful with specific target populations, sources of funding, technical support, and instruction.

CONTENTS

INTRODUCTION

This project profiles different models for Community Technology Center sustainability, based on our direct observation of plans and operations at a variety of CTCs throughout Seattle. "Sustainability" is a much sought-after status for individual CTCs, and for these centers' public and private partners as well. Our goals in presenting these profiles are to:

- help the City with its technology literacy and access policy priority setting
- provide CTCs with information to assist in their own sustainability efforts, and
- provide information and prospective funders and partners about ways they can support sustainable strategies.

With guidance from the Citizens Telecommunications and Technology Advisory Board and the City's Department of Information Technology, this work has focused on a two main research questions:

- What are key operational elements of Seattle Community Technology Centers and what are the strategies that have contributed to their sustainability?
- Since CTCs vary in size, structure, affiliation, and overall mission, can strategies that work at one center be successfully applied at others?

The research literature about Community Technology Centers and "technology healthy communities" is growing at a pace exceeded only by the rate of digital technology innovation and diffusion. An observation frequently repeated in this literature is that more attention must be paid to documenting successful practices, that is, making a record of "what works," sparing new CTCs from having to rediscover ways in which others have already established effective public access and training service delivery. Information about what works is scarce because Community Technology Centers already implementing successful strategies may expect that what they have discovered is "common knowledge" and there is little need to report on what they've learned. Or, more often, CTCs are stretched so thinly that reporting on these practices is not a high priority.

"Sustainability" Defined

The term "sustainability" was brought to its recent prominence by the World Commission on the Environment and Development, which gave voice to a general alarm at the potential long-term consequences of short-sighted resource consumption. This Commission,[1] defined sustainable development as:

> *development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

The sustainability challenge, in other words, is how to keep something going without using up the resources that support its continued existence faster than they can be replaced.

[1] This Commission is also commonly known as the "Brundtland Commission" because of its chair, Norwegian Prime Minister Gro Harlem Brundtland (**World Commission on Environment and Development.** 1987. *Our Common Future*. Oxford, UK: Oxford University Press).

This deceptively simple statement sharpens the focus of our attention on several key dimensions:

- ***Development, not growth***: While "growth" simply means increasing output or service delivery, "development" means changing institutional structures to be more resilient to stresses, and to achieve more equitable, productive and participatory output or service delivery.
- ***"Needs" come first***: "Sustainable development" implies a difference between needs and wants, and asserts that an important ingredient in achieving sustainability is to make sure that "needs" are taken care of – now and in the future – before attention focuses on satisfying "wants."
- ***The future matters***: Long-term consequences must be taken into account when making choices today, even if we don't expect to be around to have to deal with these consequences.

In the years since it was first introduced, the notion of sustainability has gained wider currency as a way of planning long-term change, and it has become apparent that what is likely to work best for the world as a whole also applies to nations, regions, communities, and community-based institutions. For the purposes of this project, "sustainability" is defined as ***the long-term ability of CTCs to maintain or improve their capacity to deliver services***. Packed into this view of sustainability are requirements of financial stability in the face of changing digital technology, continued demand from community members for the services the CTC can provide, and the management capacity to respond to community needs by delivering quality services. Put another way, a CTC is unsustainable if it uses up its resources faster than they can be renewed, relies exclusively on distant sources for its basic local needs, is unable to implement programs that respond to community need, and is unable to generate local support because there is limited demand for the services it is able to offer.

Project Methods

Before presenting the models of sustainability that highlight a number of the creative and resourceful strategies used in Seattle area CTCs, a brief description is in order to identify the methods we used, the rationale for selecting interviewees and in-depth cases, the interviews completed, and the secondary source materials consulted.

Primary data collection has been completed with a "tiered" approach – we conducted initial interviews with 25 Community Technology Centers, which we followed with a more in-depth look at 15 of these centers, and held a focus group discussion with representatives invited from the centers that we did not look at further.

Initial Canvass Interviews: The initial canvass interviews were conducted either by telephone or in person, depending on CTC staff availability. We selected these 25 sites in consultation with the CTTAB Sustainability Committee and with the City of Seattle Community Technology staff, based on the kind of organization that sponsors the center, the type of populations served, their geographic location within the City, the CTCs'

willingness to be interviewed, and the likelihood that they had developed particular strategies or practices to address key sustainability issues.

The different types of CTCs included:

- non-profit social/multiple-service agencies
- public housing developments
- subsidized low-income housing centers
- public community centers
- mutual assistance associations
- faith organizations
- family centers
- public schools
- stand-alone centers

We interviewed CTCs sponsored by organizations in each of these categories because they have different missions, services, and funding streams. All of the CTCs except the ones we have termed stand-alone technology centers are in one way or another part of a multi-service facility. By "multi-service" we mean that technology access and training are not the sponsoring organization's exclusive focus. Typically, these multi-service organizations have a more encompassing mission, and view technology as one of several ways of serving their constituents' needs. Having a CTC in a multi-service facility works to the advantage of both the CTC and the facility; the CTC can draw people to the facility that might otherwise not come, and can benefit from fund-raising, cost-sharing, and staffing assistance from the sponsoring organization. At the same time, a stand-alone CTC has a more narrowly focused mission and constituency, and can offer more specialized services to meet its constituents' needs.

We judged the likelihood that individual CTCs have developed particular strategies or practices to address key sustainability issues based on City of Seattle Technology Matching Fund grantee reports that they supplied to the City, and the knowledge of City staff and CTTAB members.

The main data collection method for the canvass was the use of semi-structured interviews with CTC coordinators and staff. Interviews took between 30 and 60 minutes each. Topics covered in the canvassing included:

- Who uses the CTC, and what do they use it for? (geographic distribution, language group, age)
- How do you know this information? (Is usage documented?)
- Does this usage fit in with the organization's overall mission? (Definitions and measures of success)
- What services does the CTC offer? (curriculum, open access, non-tech services, hours of operation)
- Who provides these services? (volunteers and staff availability and capabilities)
- How do you recruit, manage, train, screen, and retain volunteers?

- How do people find out about your center? (Do you have any outreach activities to try to reach new users? If so, what are they?)
- What does your facility look like? (large/small/ classroom/ open space/ access for those with disabilities/close to other service or social centers?)
- What kind of hardware/software and Internet capacity do you have? (quantity/type/special needs [non-English speakers/ disabled].)
- Who monitors/maintains that capacity? (role/availability of volunteers and staff).
- How do you decide if/when to purchase new computers? Do you have a technology plan?
- What sources of funding do you have? Will services continue when this funding ends? How do you do your business planning?
- Do you have partnerships or collaborate with other organizations? If so, what does each partner bring to the relationship? Are these partnerships spelled out in your business planning?

Interviewers took handwritten notes during the interviews, and afterwards prepared a detailed summary of each interview ("field notes"). These field notes are organized in narrative form according to the way the conversation actually unfolded (rather than strictly following the topic guide headings). A NUD*IST[2] coding scheme was developed that follows the topic guide headings, and each set of interview notes was coded for subsequent analysis according to this scheme.

In-depth Interviews

15 sites were selected for further inquiry in consultation with the City Community Technology Program and the CTTAB Sustainability Committee. The greater depth of study involved additional site visits to interview CTC staff, volunteers, and, where possible, users. In addition, we spent time at the CTCs, observing user flow and interaction with each other and CTC staff.

The topics covered during these additional site visits included:

- Evaluation of success and documentation of use; strategies for dealing with reporting requirements
- Development of CTC operating plans
- CTC management and supervision
- Marketing, outreach, and community involvement
- Curriculum development, training resources, and instructors; cost recovery for training services
- Operating and capital budgets, financial planning horizon, cost-sharing arrangements, in-kind contributions, advantages and limitations of partnerships for financial efficiencies

[2] NUD*IST (**N**on-numerical **U**nstructured **D**ata **I**ndexing **S**earching and **T**heorizing) is a software package used to support qualitative data analysis by indexing the contents of text files and then retrieving materials according to the indexed subjects. It allows the application of Boolean logic (e.g., retrieve the relevant passages of all interviews discussing "hours of operation" AND "mission fit") to assist the content analysis. Appendix C contains the Code Book used to support this analysis.

- What does "sustainability" mean, and what are the biggest challenges each center faces in achieving sustainability?
- How do users use the physical space?
- Are there physical barriers to increased usage, or conversely, what are the aspects of CTC location/design that make it a welcoming place?

Group Meeting: We also held a group meeting, to which we invited representatives from the Centers we did not plan to follow-up in depth. Representatives from the City and CTTAB were invited to observe this group discussion.

At this meeting, we discussed the meaning of "sustainability" from the CTCs' perspective, the biggest operating challenges the centers face, the ongoing need for the CTCs, approaches to curriculum design and delivery of training services, financial management, and various models of collaboration that may help achieve financial efficiencies.

Secondary Data: We also collected and reviewed some data from secondary sources (see *Appendix B* for a bibliography). Some of this information was helpful in preparing interview guides, while other information provided us with the specific background about the City's Technology Matching Fund and how monies from this source have been used by individual centers.

ELEMENTS OF CTC OPERATIONS AND STRATEGIES/PRACTICES

Each CTC is organized in a distinctive way, the result of history, sponsorship, and the users it serves. Despite this variability, however, a number of operational elements are common to all CTCs. A functioning Community Technology Center, to be on a path towards sustainable access and training services, will have these elements:

- Management and administration (which includes staffing, volunteer coordination, business planning, technology planning, evaluation and reporting)
- Programming and curriculum development
- Fundraising and resource development
- Partnerships (which serve to extend or substitute for in-house staffing, volunteers, training resources, financial and material contributions, space sharing)
- Networking and potential resource sharing
- Facilities and equipment (which cover space and furnishings, disability accommodations, operating hours and other access issues, hardware, software, other instructional equipment)
- Outreach, participant recruitment, and community involvement

Our research found that the type of CTC, for example whether it was part of a senior service center or part of mutual assistance organization, did not necessarily determine the strategy it used. Rather, there were various strategies associated with each of the above operational elements that were successful across different types of CTCs. In this section,

we highlight some of the key operational challenges in each of these areas, along with some strategies and practices that are successful in meeting these challenges.

MANAGEMENT AND ADMINISTRATION

We have grouped together a number of different functions into this operational element, including business and technology planning, staffing, technical support, volunteer coordination, and evaluation and reporting.

Business and Technology Planning

Many of the Community Technology Centers reported not having an up-to-date business or technology plan. Most CTC staff reported that given the uncertainty of funding, spending time and energy planning for the future was a luxury they could ill afford when they were already stretched providing direct services. However, CTCs that did have business and technology plans in place thought these plans helped save them money in the long-run and were helpful in attracting funding. In addition, the process of creating a business plan can encourage the participation of multiple stakeholders.

Staffing

At the **Chinese Information and Service Center (CISC)** the Community Technology Center coordinator not only recruits and trains volunteers, develops curriculum, and provides instruction, she also provides technical support for the rest of the organization as well as the technology center. Half of her position is paid for by the CISC and half by the **Seattle Community Technology Alliance**.

Having a paid staff person to oversee CTC activities is key to Community Technology Center success. Of the 25 CTCs we contacted, all but a few have a Coordinator or Program Manager who has primary responsibility for keeping the CTC going. Although staffing this position may seem obvious, it is an expense that many CTCs find difficult to cover through grants.

In some instances the CTC Coordinator is part-time and in some cases full time. Predictably, places with a full-time staff person (or people) devoted to CTC activities can and do implement more programs than those with a part-time CTC person. The size of an organization and its level of funding largely determine how many hats a CTC Coordinator must wear. In some instances CTC Coordinators act as program managers, CTC monitors, volunteer coordinators, outreach workers, hardware technicians and instructors all rolled into one. While such centers have been successful so far because they have a multi-talented person in this position, these individuals have less time to look at big picture funding and programming issues.

Jubilee Women's Center, a transitional housing program for homeless women, has a full-time program manager for its learning and technology center. In addition to coordinating the volunteer instructors, tutors, and technical support services for the center, she is able to spend time networking and spreading the word about the organization's important accomplishments.

In almost all instances where the CTC coordinators are also teaching and providing technical support, they have the active support of their organization's executive director, who helps with strategic planning, utilizing board members, fund-raising, networking and recruiting volunteers. The more of the CTC coordinator's time is

taken up with implementing direct services, the more important the executive director's role becomes in supporting the long term sustainability of the CTCs

In other cases, where funding is less of an issue, the CTC Coordinators are able to focus on *coordinating* activities of CTC volunteers or staff people who take over some of the service delivery responsibilities of the CTC. Where the CTC Coordinator has been successful in recruiting volunteers who teach the classes and monitor the CTC during open access hours, s/he is free to work on reporting, programming, networking and outreach activities.

The CTC Coordinator is the front-line person, there to make sure that scheduled classes take place, that monitors are available during the CTC's operating hours, that the machines are in working order, or that steps have been taken to make them so. Ironically, almost all of the CTCs reported that one of the biggest challenges they faced was funding this position. The following briefly describes the financial arrangements CTCs have used to meet their staffing needs for the key position of CTC Coordinator.

- Directly supported by a short-term grant. Although they may be exceptional, some grants cover staff salaries, or at least a portion of staff salaries. The Seattle Community Technology Alliance, the Bill and Melinda Gates Foundation, the Seattle Foundation, and the Parks and Recreation Department and the Seattle Public School District have played an important role in financing at least a portion of CTC Coordinator salaries in several of the centers in Seattle. Some of these organizations have been supported, in turn, by federal grants. Because these centers had people dedicated to the CTC only, in many instances they were able to develop extensive programs and devote some of their time to networking and grant-seeking activities. However, the funding is short-term and all of these CTCs will be faced with the challenge of finding additional funding at the end of the grant cycle.

- Supported by general operations budget of the multi-service facility, of which the CTC is only a part. In this model the CTC Coordinator may have responsibilities to both the CTC and to the multi-service organization as a whole, and overseeing the computer CTC activities is just one of several responsibilities. For example, the volunteer coordinator for the CTC may also recruit, train, and coordinate volunteers for the other, non-technology related programs offered by multi-service center. While being stretched in this way may be more challenging for individual coordinators trying to cover several different activities, they may also be less dependent on specific grants ending. In addition, a CTC coordinator who is active in the organization's other programs is in a stronger position to know how CTC activities might better serve the organization's mission.

Ballard Family Center's volunteer coordinator recruits, trains, and coordinates volunteers for all the Center's programs, not just the computer center.

- Volunteer supported: There were two examples of CTCs that did not have paid Coordinators: the CTC located in the West Seattle Senior Center, and the CTC run at the Rainier Community Center by Project Compute. The Community Technology

Center in the West Seattle Senior Center is fully staffed by volunteers. The Center has one key volunteer who handles most of the coordination and planning of the center as well as the technical maintenance of the computers and network. He works closely with the Senior Center's Executive Director, who is actively involved in strategic planning for how to leverage the potential of the CTC as both a learning resource for the seniors and as a potential income generating resource for the Center.

Project Compute was started back in 1991 by a group of dedicated volunteers. This group has remained fairly stable over the past 10 years. Since the project's inception its director has been a volunteer. However, it currently has a paid CTC assistant.

Instructors

Some of the Centers use paid instructors, some use volunteer instructors, and others use a combination of both. In many instances the CTC Coordinator also teaches a variety of classes. Whether the instructor is paid or an unpaid volunteer, several important requirements for successful instruction emerged through the interviews with CTC coordinators:

- *Language competency* for CTCs whose target populations are non-native speakers. For many immigrant communities, the language barrier complicates access to information technology.
- *Cultural competency*: We were often told it was important that CTC staff, especially the CTC coordinators and instructors, either be from the community or be familiar with that community's resources and needs. Several CTC Coordinators reported that they served as resource people for other needs expressed by community members, for example, where to find the nearest food bank, or what to do if your electricity is about to be shut off.

"People often come to classes here on the rebound. They have already tried classes elsewhere, and come here saying the class was too big, they couldn't see the screen, or the teacher went too fast." *Jacque Cook,* ***Talmadge Hamilton Senior Center*** *technology instructor.*

- *Realistic expectations*: For many of the populations served by these CTCs, the same barriers they have experienced in regard to technology may be evident in other areas of their lives as well. Although the ultimate goal for improving someone's access to information technology might be to improve their job skills, or to facilitate their political engagement, few instructors will see these outcomes during the course of their instruction. Making sure that volunteers are aware of interim signs of success (which may mean something as simple as consistent class attendance) will help instructors appreciate the many small steps to "success" that might otherwise be overlooked.
- *Patience*: some of the users may be approaching a keyboard for the very first time. Others may have already tried, and been unsuccessful at learning computer technology. Instructors who successfully match the pace of their instruction to the pace of their learners report a great sense of accomplishment when they hear a student yell, "I got it!"
- *Consistency*: Many CTCs stressed the importance of consistency for people in the early learning stages of computer technology. Students get used to the teaching style and vocabulary of a particular individual and it is sometimes confusing for them if

teachers change midway through a class. Some of the Community Technology Centers we visited have instructors who teach almost all of the classes on a particular topic, for example all of the introductory e-mail classes, or all of the MS-Word classes. This is a benefit to the students (who get consistent instruction), but it is also beneficial to instructors (who have a chance to refine their materials as they repeat the classes).

The volunteer coordinator for the **Ballard Family Service Center** developed a technology committee that includes both Center staff and user-volunteers. The technology committee serves as a coordinating body and has implemented several new practices to improve the operations of the Center's technology lab. The role the user-volunteers play in designing and implementing these policies (such as computer use rules) and practices (routine monitoring of machine settings) is very important.

- *Coordination:* In cases where technology instructors turn over fairly frequently, or where a wide variety of classes are taught by instructors who are not CTC staff, coordinators reported that it was extremely useful to have some curriculum consistency (see "Programming and Curriculum Development" below for more detail) and to call the instructors together for occasional meetings so that they were aware of other information that either was or was not being covered by other instructors.

Stipend Volunteers: Several CTCs have maximized their staffing dollars by hiring volunteers through the Americorps and VISTA programs. These volunteers do the work of a full-time staff person, but cost the CTC significantly less because the volunteer's salary is subsidized by the sponsoring organization. VISTA volunteers have made substantial contributions to several of the CTCs. [3]

Work Study Students: Several of the CTCs employ work study students from the University of Washington. These students' salaries are subsidized by the University, which will reimburse the employer up to 65% of the student's wages. Seattle Central Community College and Seattle University also have work study programs. Centers typically hire work-study students to work as CTC monitors or tutors, though some students have also proven themselves to be very capable coordinators. The drawback of relying heavily on this type of staffing is that student availability may change with each quarter. The YWCA Job Connection is another staffing resource.

Technical Support

Just as centers use a variety of approaches to filling the CTC Coordinator and instructor positions, they are equally resourceful in locating sources of technical support to help maintain, repair, and upgrade workstations and networking equipment. Technical support is an unglamorous but essential element to effective service delivery.

The **Chinese Information and Service Center**, **NewHolly**, **Garfield**, **Yesler Terrace**, **South Park**, **Powerful Schools**, and **High Point** all receive the benefit of regular, part-time, technical support services from a skilled technician, thanks to a grant from the **Seattle Community Technology Alliance**. Several of these Community Technology Centers reported that they would not have been able to keep their facilities operational with out this assistance.

- Directly supported by a short-term grant: Many of the same organizations that have received funding for a paid CTC coordinator have also received funding for technical support. In many

[3] One Center also suggested looking for a volunteer from the Jesuit Volunteer Corps.

instances the technical support specialist regularly visits several different organizations, both trouble-shooting and conducting routine maintenance. Centers that have had access to this assistance could not imagine what they would do without it. There are no guarantees, however, that such assistance will continue after the current funding cycle ends.

- Supported through the operational budget: Several of the Community Technology Centers have a technically savvy person in their organization whose responsibilities extend to providing technical support to the technology center. This person may be the same one who coordinates CTC activities and teaches the technology classes, someone who provides technical support to the entire parent organization, or someone who has a multitude of other responsibilities in the organization but gets called on to lend technical support when needed. These Community Technology Centers rely on in-house expertise and only call in technical consultants in exceptional circumstances.

The technical support person for the technology centers at **Emerald City Ministries**, the **Martin Luther King, Jr. Apartments**, and **Rotary Boys and Girls Club** also provide the technical support for the greater multi-service center or housing development of which they are part.

- Volunteer supported: The ability to solve computer hardware and network problems was reported as the most difficult skill set to find in a volunteer. In fact, having to rely on volunteer technical support has nearly incapacitated some community technology centers. However, there were several CTCs whose primary technical assistance came from volunteers. While relying on volunteer technical support has proven a workable strategy in some instances, it can also be very risky in that there is usually little backup if the volunteer leaves or is occasionally unavailable.

When the **West Seattle Senior Center** first started its Technology Center, the expenses associated with computer maintenance and repair were a serious financial drain. Fortunately, a few key technology savvy volunteers came on-board, and devote many hours to the smooth operation of the CTC's machines and activities. Now the Technology Center actually earns income for the Senior Center.

Preventive maintenance can reduce the need for outside technical assistance. Easy measures include using a maintenance utility package such as Norton System Works, for example, and having someone routinely check the settings and clear browser caches and cookies from the machines.

Recruiting and Retaining Volunteers

Volunteer Recruitment: As with many non-profits, recruiting and keeping good volunteers has been important to the success of Seattle CTCs. Some Centers have found themselves in the enviable position of not having to invest heavily in recruiting volunteers, because so many volunteers come to them. These Centers reported that volunteers learned about them through word of mouth, through their web pages, or in response to some positive press. However, most CTCs are actively involved in volunteer recruitment. Suggested locations for finding volunteers include:[4]

[4] Local contact information for these sources can be found in Appendix D

- The Carlson Center at the University of Washington
- Seattle Central Community College
- Seattle University
- Churches and synagogues
- Local high schools
- Company good-will groups (e.g., Boeing Bluebills, Blacks at Microsoft)
- Service organizations (e.g., Kiwanis, Rotary)
- Professional associations (e.g., Black Data Processing Associates)
- Northwest Center
- www.volunteermatch.com
- Digital Promise (for CTCs in public housing developments)
- Former CTC program participants
- Technology Access Foundation

Retaining Volunteers: The majority of the CTCs interviewed for this research reported having a steady core of volunteers. This consistency has made staff's work easier by reducing the number of hours needed for recruiting and training replacement volunteers. In addition, CTC users become accustomed to particular volunteers, the way they teach, their reliable assistance during open access time, or their supportive role in the user's life in general. Their steady presence positively affects user comfort with the technology and with the CTC. Several strategies were recommended by CTC staff that may help Centers retain good volunteers:

- *Use them well*. Volunteers want to contribute and make a difference. Make sure they have a job to do when they come or make sure they know how to go about finding one. Organization and volunteer expectations of the kinds of work the volunteer will be doing should match.
- *Orientation*: Make sure volunteers know what to expect from the organization and its clients. Volunteers need to have an understanding of the organization's clients in terms of computer literacy, life circumstances, and cultural differences.
- *Celebrate their work.* Let volunteers know how important they are to your organization. Recognize them through parties, free lunches, or acknowledgments in the organization's newsletter.
- *Integration.* Hold volunteer meetings to keep people informed of changes or developments in the organization. This is especially important if volunteers play a key role in the organization's staffing. Such meetings can help show volunteers how their contribution fits into the over-all effort and may help them to better understand the need to follow certain procedures or curriculum.
- *Enable those who benefit from the CTC to contribute to its success*: Where possible, maximize the use of volunteers who are also users of the Center. This empowerment strategy strengthens individuals and communities by enabling participants to contribute as well as benefit from CTC

Current users of the Computer Technology Centers at **Ballard Family Services** and **Real Change** play important roles in keeping the technology centers going. At Real Change many users are also volunteer technology lab monitors. At Ballard Family Services, the user group plays a key role in monitoring, maintenance, and coordinating activities.

activities. In addition, helping others to master the technology reinforces skills recently acquired by new users.

Board Members

At **Real Change**, the nominating committee looks for board members with different skills. Some have expertise in fundraising and others in management. "We have exciting diversity on our board. When we need a new board member, we put out the word that we are looking. It's easy to get board members. We are a high profile organization that people feel good about." *Tim Harris, Real Change Executive Director.*

In addition to having great volunteers involved in their daily activities, CTCs pointed to the work of their board members as key to their sustainability. Drawing board members from the community being served is important for helping guide the organization's mission, and having working board members who can handle oversight and participate in the Centers' day-to-day activities is important. However, it is also crucial to have board members with business connections and contacts outside of the community. When a board is made up of diverse members, an organization's social capital increases as each board member may be able to tap into a different network of social and business contacts.

Management and Technical Consulting Assistance

Several CTCs spoke of the valuable services provided to them by paid consultants. In a few instances, this consulting was offered *pro-bono*. For example, Project Alchemy provided a technical plan for Real Change that served as the basis for its successful proposal to the Gates Foundation. In other cases, where funding was not available for a full-time staff person, CTCs received grants that could be used to hire short-term consultants. For example, MGS Consulting provided a data-base management plan for Jubilee Women's Center. The Community Technology Centers in this study also reported using: Above the Mean and N-Power for technical services; Executive Services Corporation for business administration expertise; and grants from the Non-profit Assistance Center for a variety of consultants. The Non-Profit Assistance Center also hosts administration workshops for CTC staff.

Evaluation and Reporting

Tracking and reporting on CTC activities is important as a mechanism for feedback on program design. It can also provide an indication of community impact, which is useful for marketing and resource development, and is usually a requirement of government and foundation grants. In addition, these reporting activities can help CTC coordinators see where their programs are strongest, and where they could use some additional support.

The CTC Coordinator at **Garfield Community Center** says it takes her only 10 minutes to write the weekly reports that she files with her supervisor and a SCTA member. In these reports, she lists the classes taught that week, the number of users and new users, mentions current challenges and highlights the Center's biggest accomplishments for the week. She also reports the names and hours of the volunteers. (*See Form 2, Appendix E*)

Good documentation procedures do not have to be overly time consuming. If CTCs can focus in on some meaningful and easily accessible indicators of CTC programming, these can be quickly noted and summarized at the end of each week as part of a regular reporting process.

None of the people we talked with believed that numbers alone could capture the good work the CTCs were doing. At the same time, most recognized that numbers do matter. Most Centers track the numbers of CTC users, volunteer hours contributed, and classes taught.

When a homeless man became a volunteer at **Real Change**, he was given his own binder which kept track of his duties and responsibilities. This not only helped him to remember what he was supposed to do, it also made him an 'official' volunteer. This kind of documentation can provide evidence of the empowerment component of many CTC missions.

Community Technology Centers need to strike a balance between collecting useful programming information and making sure the user doesn't feel that the information gathering process is too intrusive. It is important that users perceive the CTCs to be warm, inviting places. If users resent or are leery of providing the requested information, they may be discouraged from using the technology centers.

Centers used both manual and automated data collection procedures.

- *Manual data collection*: every user and volunteer is asked to sign in and note the time they arrived before they log-on to the machines. In most instances the sign-in sheet also includes a column for users to note the time they finish and to sign out. Some centers also ask people to list the programs they used, or tasks they accomplished at the CTC. New users are asked to fill out user information sheets, in some instances supplying their names, phone numbers and addresses. When reports are needed, this information is either tallied manually, or entered into a database, where the numbers are crunched to produce reports, write proposals, or to evaluate center activities.

The CTC Coordinator at **High Point Career and Technology Center** can monitor performance improvement in the ESL and specific applications training courses because the central server captures users' exercises and tests. The coordinator also queries class room teachers whose students come to use the center about their skill development and surveys class participants at the end of each session, asking them about their experience. When it comes time to prepare grant applications, she has all the information she needs to make the case for her funding request.

A draw-back of the manual system is that not everyone signs in and out, or provides the requested information. In addition, there may not be staff time available for the data to be tallied manually or for it to be entered into the data base. However, it is a low-cost system that has worked well for some CTCs.

- *Automated Data Collection*: Several centers have recently converted to an automated data collection system. In these systems first time users are asked to fill out personal profiles on-line, using either their real names or pseudonyms. The database creates a record and user name for them and each time they use the computer they will need to log-in with their user name to bypass the user profile query. Depending on what the system is designed to track, the server may capture such things as software accessed, the program in which the user is enrolled, national origin, or computer exercises completed. Evaluation questions might be asked of the user every two to three months. These programs will be used to generate reports tailored to a variety of ends.

People from various language groups attend classes at the **Horn of Africa Services** technology center. Some of these groups have a long history of conflict in their native lands. At the community technology center, they sit next to each other in classes and have discussions that they never thought would have been possible before. These observations are potentially of great value to organizations interested in conflict resolution or community building, but are not likely to have been built in to a computer-user database query.

A disadvantage of these automated systems is that their initial costs are relatively high, and as the CTCs evolve or their programs change, the data collection instruments may have to be modified. In addition, automated data collection systems may not be able to capture all of the important information and should not substitute for CTC coordinators and instructors observing participant interaction or seeking feedback directly from participants.

For example, CTC staff repeatedly told us success stories that would be hard to capture in numbers, and that in terms of outcomes, successes needed to be measured in small steps. Examples of these positive outcomes include:

- An increase in self-confidence by women who had been in domestic abuse situations.
- Increased attention to responsibility by a homeless man who worked as a CTC volunteer.
- A willingness to enroll in courses at the YWCA, Seattle Public Library, or Community Colleges)
- Increased interaction among neighborhood or community members

CORNERSTONES:
Management and Administration

- **Coordinator has key role**: A CTC's operational success depends on having a technically competent, adequately paid Coordinator. No single job description captures the range of responsibilities a Coordinator might have in different settings. However, the more involved in direct services the Coordinator is, the more responsibility falls on the sponsoring organization's executive director to support strategic planning, fund-raising, and recruiting volunteers.
- **Look for instructor versatility**: Instructors are most successful when they have attributes beyond the instrumental skills that support technology training, including knowledge of and sensitivity to the cultural backgrounds of their trainees, and familiarity with an extended network of community resources that support other dimensions of their trainees' lives.
- **Plan for tech support**: Technical support is an unglamorous but essential factor in sustained service delivery. Key to suitable technical support is preventive maintenance, having support available when it is needed, adequate funding for regular support (as exclusive reliance on volunteers for tech support rarely proves dependable), and clear documentation of equipment configurations to make trouble-shooting more manageable.
- **Support your volunteers**: Volunteers extend the CTC's resources. Recruitment, supervision, and retention require the attention of someone familiar with the CTC's day-to-day operating requirements.
- **Tracking is a useful planning tool**: Tracking CTC use for reporting purposes is not just a requirement imposed by funders; it is useful for monitoring ongoing operations, helps evaluate users' needs and future programming, and serves as evidence of the good work the CTC has accomplished.

PROGRAMMING AND CURRICULUM

When CTCs were first established to help bridge the "digital divide," much of the emphasis was on access. Now, the emphasis has shifted from access to outcomes. What difference does having access to technology make in a person's life? Technology is currently being promoted (by funders, community technology policy centers, and by CTC staff) not as an end in itself, but as a tool. In order to maintain both user, donor, and other stakeholder interest, CTCs must develop programs that help users to achieve their goals, whether those goals be to improve job skills, communicate with friends and family in far away places, access on-line news and information sources, conduct research on government programs, or to publish original poems, stories, or multi-media presentations.

Drop-in and Structured Classes

Most CTCs favor "instruction" and "classes" over open access. However, many CTCs have tailored the kinds of classes or instruction they offer to meet the individual needs of their clients within the context of their own limited resources. Some classes are structured in a traditional manner but many centers offer drop-in, individualized instruction. The following are examples of the ways in which CTCs are providing their services.

Individualized programs: In CTCs where users speak limited English and a variety of other languages, or where the user population is unable to read in any language, individualized, one-on-one instruction often works better than classes. CTCs usually refer to these sessions as "program time" even though there are no classes going on. In some instances this individualized instruction might focus on learning the technology itself (e.g., improving Word skills) and in other instances it might focus on the end product (like finding a job or creating a flyer).

The **Rainier Vista Jobs Resource Center** had planned to teach training classes, but found that highly individualized instruction was more effective. The goal was to help users become familiar with digital technology in a context that was meaningful in their lives (e.g., preparing a resume for a job search, a flyer for a community event).

Certificate Programs: Two CTCs have established self-paced certificate programs designed to increase their clients' job readiness. Participants who successfully complete the programs will obtain a certificate from Cisco Systems in network administration (Martin Luther King Apartments) or a MOUSE certification from Microsoft (Jubilee). Both of these programs are self-paced, but in both instances instructor support has been key.

Jubilee Women's Center offers regular technology classes in the evenings. However, each woman also has her own "tech coach" who gives her personal instruction and encouragement. The classes are good for introducing individuals to the technology, but the individualized attention the tech coaches provide is invaluable in helping women to develop their skills.

Structured Classes are offered in a variety of ways.

- Workshop type classes meet once for a two-hour period.
- Classes meet once or twice a week for eight months.
- Classes meet twice a week for three- to four-hour periods.
- Classes meet three times a week for a month.

Curriculum

To maintain student interest and success in completing the curriculum, instructors were mindful of and modified their curriculums to suit students' pace and knowledge level. Most Centers offer courses covering basic introduction to computers, keyboarding (using Mavis Beacon software), e-mail, navigating the World Wide Web, Excel, Word, and Access.

When Centers first began offering classes, instructors often developed their own curriculum or borrowed and modified a curriculum they found on the Web or in their MIS department at work. Many centers are now keeping copies of curriculum already used in their centers so that new instructors do not have to begin from scratch. In addition, some centers are asking that volunteers follow a standardized curriculum as a kind of quality control measure and to assure that students receive the training that will enable them to move on to more complicated classes the CTC may offer.

Community Technology Centers that have a high percentage of repeat users, or users who have already moved beyond the introductory-level classes, are developing and experimenting with a variety of classes to match users' interests. Examples of the classes taught in Seattle CTCs are:

Three years ago clients of the **Chinese Information and Service Center** expressed their need for information technology basics. Now many people are interested in an introduction to more complex applications. The coordinator found that doing workshops (one time sessions) on these topics works better than classes offered over an extended period. Workshops are easier to schedule and easier for students to attend.

- Visual Basic
- HTML classes
- Creating family trees
- Card making
- 3-D animation
- Driver's education and GED software
- Web-based curriculum: Genyes.net (http:// www.genyes.net/genwwwy/samples/) and http://www.genyes.org/gengit (Girls Issues in Technology, also use the "building big" curriculum available through the web site of the local PBS television station (High Point) ; pbskids.org
- Computer maintenance and repair
- Desktop Publishing
- Naturalization and Citizenship Classes
- FrontPage
- Computer networking
- ESL instruction

Emerald City Outreach Ministries had an MS-Word class that lasted from October 2000 to June 2001. Talk about relationship building! Eight out of the ten people who signed up for the class in October were still attending regularly in June.

The key to CTC programming is flexibility, understanding when something is working and how to change programs to make them work better. These changes could mean integrating literacy or ESL training, providing childcare services, or dramatically adjusting the curriculum to match learner comprehension.

CORNERSTONES
Programming and Curriculum Development

- **Training a higher priority than just access**: "Instruction" and "classes" are favored over open access as the preferred use of space. This is consistent with the renewed emphasis on digital technology as a tool that can be used to help individuals and families achieve specific skill development and communication objectives.
- **Flexibility Matters**: Successful centers have learned to be flexible and creative in their program development to suit users' needs (making classes run for extended periods of time, dumping structured classes for "workshops" or individualized instruction).
- **Focus on meaningful content**: Design and offer programs that will hook potential students' attention or address real needs. Examples include brochure production, using the web to understand your doctor, or building a snappy resume.

FUNDRAISING AND RESOURCE DEVELOPMENT

Just as some CTCs have a dedicated group of volunteers seeking them out, some have managed to attract loyal donors. Sometimes donors simply have a particular affinity for the CTC's target population or general mission of the organization of which the CTC is a part. However, there are certain strategies that can help CTCs cultivate loyal donors and increase the circle of potential new donors.

Elements of Fund Solicitation

- Have a clear mission statement and make sure the CTC's role in achieving it is apparent. If the request for funds is for routine operation costs (for example, to cover CTC coordinator or technical support) the proposal should clearly explain how the CTC improves performance measures of the parent organization.

- If the request for funding is for a particular program or class, the proposal should explicitly state the problem the organization is addressing through this program and how requested funds for the CTC will solve it.

- A proven track-record, innovative approaches to problems, and high visibility may all help in making favorable impressions on donors.

- Clear evidence of community involvement demonstrates to donors that the Community Technology Center is valued in that community. If CTCs can demonstrate that they've been successful in developing some financial resources on their own, they are more likely to find financial support elsewhere.

- Know and meet donor expectations. This is not only important for obtaining additional funding from the same donor, but in terms of applying to future donors. Grant-making circles are relatively small and donors may share information with each other.

The Coordinator at **High Point**'s Center knew that a key ingredient to continued funding is the ability to document what has been done with the money received. She made sure enough money was included in the budget to develop a data tracking application which captures information that will be interesting to funders.

In cases where a CTC is trying to find support for a particular class or program, they might look to organizations whose interest is primarily the class or program content rather than the general mission of the CTC's parent organization. For example, one CTC was successful in obtaining support from an organization primarily interested in the arts to run a music class for its members.

In some cases the classes offered may be primarily volunteer-driven, i.e., someone volunteers to teach a particular class. One CTC has developed a worksheet whereby staff members will evaluate whether and how that class helps the organization meet its performance measures. (See Appendix E, sample form 1). This not only helps the technology committee decide which classes to offer, but also facilitates the writing of reports and proposals to funders in that program information has been documented throughout the year.

While large grants are a boon to any Center, most CTCs would rather not rely too heavily on one donor. A good source of possible donors is the Charitable Trust Directory for the State of Washington. Philanthropy Northwest has a database directory which can be purchased from them or utilized at the public library. City, state, and national governments and alliances have also been sources of grant money.

In most of the CTCs we saw, CTC coordinators felt they were too busy with day-to-day operations to write grants or cultivate relationships with donors. Board members and Executive Directors of the parent organization do the majority of fundraising activities.

Rotary Boys and Girls Club and **West Seattle Senior Center** have staff or volunteers who handle most of the day to day operations of the technology centers. However, the Executive Directors of the organizations are actively engaged in obtaining funding, in –kind donations, and catalyzing members of their Board to support the CTC's programs.

For some CTCs, having a staff person available for grant-writing may be an unaffordable luxury. In some instances there may be a volunteer willing to take on this responsibility, or an organization willing to donate funds to enable the CTC to contract with a professional grant writer. In either case having the necessary data available will facilitate the grant writing process.

Relationship Building:
Whether or not a formal grant is required for agency or foundation support, relationship building is key to successful fundraising. When funders can connect a person to an organization with which they may not otherwise be familiar, proposals are more likely to make an impression. Some donors are even willing to come out and visit the CTC and provide recommendations for how the Center could increase its chance of receiving funding.

The **911 Media Arts Center** is able to raise over 50% of their operating costs through their classes. **West Seattle** and **Talmadge Hamilton's Senior Services Centers** both charge fees for the classes they offer. At West Seattle, the instructors are volunteers and all the class fees go into the operating budget. At **Talmadge Hamilton** the instructor is paid, but contributes 20% of the fees into the operating expenses.

Many CTCs have received donations, primarily in terms of computer hardware, software, or donated labor, without having to write formal grant proposals. Often times this donation was facilitated by the relationships CTC staff, board members or volunteers had with people or businesses outside the non-profit community. For example, corporations such Boeing, Qwest, SAFECO, Regency Blue Shield and Microsoft were frequently mentioned as sources of important contributions.

Fees for Services
While applying for grants or soliciting other forms of donations was the most common ways CTCs acquired resources, it is not the only way. Several of the CTCs recover some of their operating costs through earned income.

Several of the facilities mentioned renting out their CTCs to businesses or other non-profits. This is an option that is probably restricted to larger CTCs.

Charging participants for classes is another way CTCs manage to add to their pool of resources. The following represents the range of fee structures used by CTCs in Seattle.

- Many Centers charge no fees for their services. Depending on the target population, charging fees may be inappropriate and even disallowed by certain grants.
- Some Centers charge small fees, about $5 to offset the cost of photocopying a curriculum. A small fee may have the added benefit of encouraging students to show up for the classes.
- One CTC with a high end specialty training curriculum raises more than half its operating fees from educational programs.
- Some CTCs are able to charge between $20-$45 for a multi-session course, a cost that works out to be $4 or $5 hour. These fees can form the basis of the instructor's salary, or in cases where the instructor is a volunteer, can go directly into the operational budget.
- Some Centers charge no fees for introductory classes, but apply fees for the more advanced classes.
- Establishing a fee-based computer repair service or selling donated computers refurbished at the CTC helps to generate income and has the added benefit of enabling students to practice what they've learned.

- The parent organization of one of the CTCs was able to build an endowment fund. While not designated specifically to the operational costs of the CTC, the proceeds from that endowment will help contribute to over-all operating expenses, including those of the CTC.

CORNERSTONES
FUNDRAISING AND RESOURCE DEVELOPMENT

- **Wide participation complements leadership grants**: While most CTCs have multiple sources of support, successful CTCs usually have a limited number of especially generous sources that have made a significant difference. For sustainability's sake, however, widespread participation in resource development is just as important as landing that single big grant.

PARTNERSHIPS – THE IMPORTANCE OF RELATIONSHIPS

Our observations indicate that engaging in a variety of partnerships with non-profits, government entities, and businesses was an important means of leveraging scarce resources. Some Centers invited government and non-profit entities to use its CTC for classes for their own training purposes. Sometimes CTCs receive financial compensation, for the use of their CTC, but in many instances the value of the partnership for the CTC was that a new group of users is introduced to the center, or that the center was being used during times when it might otherwise have been idle.

The following are just a few examples of these types of partnerships established by Seattle CTC's:

User Group Partnerships:

- A drug rehab center uses Emerald City Outreach Ministries CTC during the day
- Garfield Family Services regularly sends their clients to the neighboring Garfield Community Technology Center
- The Refugee Women's Alliance and Seattle Children's Museum have used the Community Technology Center at Rainier Vista for job training and educational programs
- Seattle Public Schools uses the Project Compute CTC for one of its after school tutoring program
- Head Start and other early educations programs have used the Centers at both Yesler Terrace and High Point Elementary School

The **Martin Luther King, Jr. Apartments** Business and Technology Center has partnered with the US Department of Health and Human Services National Centers for Excellence in Women's Health to demonstrate the use of technology as a tool to teach public health information. They've also partnered with The City of Seattle Department of Neighborhoods' P-Patch program, which comes to the Martin Luther King Apartments and helps residents prepare garden beds, contributing top soil and seeds. Plans for the program involve using the web for information about best gardening practices.

Instructional Partnerships:

Another kind of partnership is where non-profits develop special instructional programs that they are willing to share with CTCs. This helps increase the range of programs a CTC can offer and increases the audience for the partner organization.

Fiscal Agency:
Some CTCs that do not have their own 501(c)3 (non-profit corporate tax) statuses have partnered with other organizations that could serve as fiscal agents. There are a variety of organizations that could provide this service, but examples from this study are church organizations, and ARC (Associated Recreational Council).

Facilities:
CTCs also have partnerships with organizations that provide them the physical space for their CTCs. Examples of these types of partnerships include:

- Seattle Housing Authority
- Community Centers (City Department of Parks and Recreation)
- The Boeing Machinist Union (owners of the Martin Luther King Apartments) and First AME Church (owners of Bryant Manor)

Programming:
Partnerships where a government entity or non-profit organization funds particular programming effort at a CTC:

- Several of the Seattle CTCs have been sites of the Seattle Youth Employment Program and the Bilingual Orientation Classes.
- The 911 Media Arts Center developed collaboration in programming with the Henry Art Gallery, KCTS Public Television, the Bellevue Art Museum, the Seattle Art Museum, Northwest Film Forum and the Jack Straw Foundation.

Technology Partnerships:

- Millennium Cable provides broadband Internet service to the STAR Center,[5] Yesler Terrace, Garfield Community Center, and the Chinese Information Service Center.

[5] **S**pecial **T**echnology **A**ccess **R**esource **C**enter, at the Center Park public housing development in Southeast Seattle.

CORNERSTONES
PARTNERSHIPS

- **Extend or substitute for staffing, training, financial contributions and space sharing**: Partnerships with organizations other than CTCs are established to exchange both resources and information. More opportunities for exchange of specific information among CTCs would help increase the awareness of successful operating strategies and effective approaches to fund-raising and volunteer recruitment.
- **Clarify Expectations and Roles**: Where partnerships work effectively, it is due in no small part to the partners' work of clearly spelling out their mutual roles and responsibilities, along with the benefits and interests of each party to maintaining the partnership.

NETWORKING AND RESOURCE SHARING WITH OTHER CTCS

Nearly all CTC staff reported a shortage of resources. Some CTCs were open to the idea of sharing resources with other Centers, although they were unsure of the form that sharing would take. CTC staff talked in very general terms about the potential associated with being able to share:

- People: Volunteers (CTC monitors, instructors, grant-writers, technicians).
- Work: marketing, grant-writing, curriculum development.
- Access to hardware/ software: taking advantages of buying in bulk.
- Information: A surprising finding was that there wasn't a lot of information sharing among CTC coordinators, though each CTC coordinator thought that such sharing would be extremely useful. Some of this sharing could be done easily via a list-serve or discussion group, but many people expressed an interest in regular meetings.

Information that people thought would be most useful to share includes:

- Where to get good deals on hardware and, software?
- What marketing strategies have you tried and how have they worked?
- What programs are particularly successful with teens?
- Where to look for funding and who will fund operating expenses?
- Where to find affordable technical support?
- Where to find an instructor to teach a class?

Members of **Digital Promise** participate in on-line forums where they can share information about curriculum; policy and procedures; daily operation hints; marketing and funding ideas. Many of these ideas are discussed further when members meet in person at regularly scheduled Neighborhood Network sessions.

Some CTCs join coalitions, or affinity groups for networking or collaborative purposes, for example to share the work involved in grant-writing and curriculum development. For example, the SCTA and Digital Promise are examples of such coalitions. These kinds of partnerships are still not common in Seattle. Many Centers pointed to the tensions that sometimes arise when similar organizations are competing for limited funding. However, Centers also expressed a desire to know more about what other Centers in the Seattle area are doing and feeling somewhat frustrated by the fact that so many of them may be re-inventing the wheel.

The World Wide Web is full of information relating to operating a CTC, but it is hard to evaluate the quality and relevance of this information. How can they know what really works and why? Occasional face to face discussions can help foster a sense of community and trust among staff at different CTCs. The contacts and relationships they develop will help them to evaluate and adapt successful practices used elsewhere.

CORNERSTONES
CTC NETWORKING AND RESOURCE SHARING

- **Sharing can be worth it**: Financial resource limitations can be mitigated (potentially) by sharing volunteer recruitment efforts, fund-raising, curriculum development, and access to discounted volume purchases.
- **Information exchange opportunities needed**: More opportunities for exchange of specific information would help increase the awareness of successful operating strategies and effective approaches to fund-raising and volunteer recruitment.

FACILITIES AND EQUIPMENT

This category of operational elements groups together all of the physical infrastructure that supports public access to digital technology and training services: the physical space, the furniture, the computers, printers, peripherals, Internet connections, networking hardware, software, and physical / hardware / software accommodations for users with special needs. In addition to the material circumstances of the physical space, we also considered such dimensions of the facilities as their accessibility to intended users, damage and theft security, operating schedule and how that fits with needs of intended users.

The facilities and equipment constitute the operational element that has been easiest for CTCs to support initially. The acknowledged need to enhance access to digital technology has led donors, community-based organizations and public agencies to place a high priority on equipment and network installations, furnishings – in a sense, investing to put the "technology" into these centers.

Physical Space

With one exception,[6] all of the CTCs we looked at that are part of multi-service facilities occupy spaces that were renovated or modified to accommodate technology access and training services. In many instances specific fund-raising was undertaken to pay for these renovations, and space rental costs generally have been absorbed in the multi-service organization's operating budget, or offered as an in-kind contribution to the CTC. At least two facilities, 911 Media Arts and Technology Access Foundation, recover some rental expenses by making their facilities available for a fee, under certain conditions.

In most cases, the CTC's operating hours are the same as the multi-service facility's overall schedule. This almost always involves some time on evenings and weekends to accommodate users' other commitments. If the CTC's operating hours are restricted, it is not necessarily because of competing demands for the space. Instead, it is likely to be because funding limitations prevent the CTC from having adequate supervision.

In some cases, the CTC can best meet some of the demand for its services by having operating hours that are different than what is scheduled for the rest of the facility (e.g., the Powerful Schools and High Point Career Center, which are both housed in elementary schools). In these instances, the sponsoring organization is willing to keep its doors open, but may charge the CTC budget to pay for security.

Most CTCs are located in places that are easily accessible to their intended users. They are generally well situated along public transit corridors, and usually have at least some parking available for people who drive. Many of their regular users live within walking distance. The STAR Center, which was developed specifically to accommodate users with physical disabilities, is something of an exception. Located at the Center Park public housing development in Southeast Seattle, it provides people with disabilities access to computers that are modified to their needs. People who would potentially benefit from the equipment at this facility are geographically dispersed throughout the city, however, and for many it is a major expedition to get to Center Park.

Most of the CTCs in this study were very visible, either because they could be seen from the street or because they were next to main activity areas of the facilities in which they were located. Often flyers were posted on nearby bulletin boards announcing current and upcoming activities at the CTC.

The physical layout of the CTC spaces generally fit in a single open room, and are organized into one of two patterns: (1) a classroom, with rows of desks all facing a focal point that can be occupied by an instructor, who can see the users' faces, but not what is displayed on their computer screens. The advantage to this arrangement is that if the instructor is using an LCD projector, all students can be facing the screen. Or, (2) a work room, where workstations are arrayed along and facing the outside walls, so that an instructor or supervisor can readily peer over the users' shoulders to see what is on their

[6] The NewHolly Campus of Learners facility was designed and built specifically to accommodate community technology access and training activities.

displays. The advantage to this arrangement is that people can easily work with neighbors on either side, and it is easy to move from one's own work station to another student's.

Network servers / routers are placed out of easy reach or in secure locations, as are supplies and software documentation. Food and drink are prohibited altogether, or restricted to a particular activity area away from computers.

Furniture and Digital Equipment

Most places initially acquired a mix of surplus machines and furniture that they have been gradually upgrading and standardizing. It is a never-ending quest to keep up with new technology as it becomes available, and with what is necessary to train people for the contemporary workplace. However, most Seattle CTCs do not have current technology plans that anticipate the budgetary requirements of upgrades and replacement cycles. The few that have developed technology plans have found them to be very helpful in guiding their resource allocation and in securing funding. Centers who do not feel they have the staff time or expertise to develop such a plan should know that there are tools available to help (e.g., the TechAtlas and TechSurveor tools that are available at N-Power's web site – see Appendix D for the URL and related resources).

Internet Connections

Broadband connections are available to almost all the CTCs, thanks to cable franchising and marketing agreements facilitated by the City's Department of Information Technology. "Digital Divide" advocates remind us, however, that as data transmission capacity increases, we must remain vigilant to assure that under-served and disadvantaged neighborhoods are included in plans for backbone upgrades and "last mile" solutions, and in view of the age of buildings that house many of these CTCs, as wireless local area networking technology upgrades become more affordable, such technology must be made available rather than retrofitting these buildings for wired networking.

The **STAR Center** has the most extensive computer technology options for people with disabilities. One-handed keyboards, talking computers, and dozens of software solutions are just a few of the resources available.

Special Needs Accommodations

All of the CTCs were accessible by wheel chair. Several CTCs have trackballs available for those with dexterity problems in their hands. Others have large print on their icons and screen pages.

CORNERSTONES
Facilities and Equipment

- **Access and visibility vs. security tradeoffs**: CTCs are generally in accessible locations, but a tradeoff must be struck between making them visible and attractive to casual drop-in traffic on the one hand, and making sure they do not become inviting targets for theft, vandalism, and other security hazards.
- **Upgrades – the never-ending quest**: Initially, facilities and equipment have been the easiest to fund. It is a never-ending quest to keep up with new technology as it becomes available, and what is necessary to train people for the contemporary workplace. CTCs that are equal to this quest have developed technology plans that address long-term needs, and are careful to make sure that their programs and services drive their determination of hardware / software needs, rather than upgrading just to have the latest versions available. Budget planning must properly anticipate upgrade and replacement cycles.

OUTREACH AND PARTICIPANT RECRUITMENT

The word "community" in the Seattle Community Technology Centers sometimes refers to particular neighborhoods, but in many cases refers to a particular population, whether it be seniors, East African immigrants, or homeless men and women. In many instances, users were willing to travel a substantial distance to use the CTC where they feel most "at home."

Both CTC staff and users reported that they felt comfortable using the CTC in ways they were not at the Public Library. For example, for many immigrant communities, language is a powerful barrier to technology access. Though classes at cultural and mutual associations may be primarily taught in English, having people available who are able to translate ideas into their native language is extremely useful. Seniors reported feeling more comfortable learning about computer technology at the Senior Centers because staff there were very patient, and because they were learning among their peers. One user reported that the Community Technology Center at the Ballard Family Services Center had a very comfortable "family atmosphere."

A key to the success of many Seattle CTCs is their ability to design programs and policies appropriate to their population. Some of the considerations include:

- What programs would most help meet identified needs for the market/community to be served?
- How much information will users be willing to provide about themselves?
- What is their level of reading and computer literacy?
- Will men and women be more comfortable attending the CTC at different times?
- Should attendance policies for classes be enforced?
- Should fees be charged?

- What content topical areas are most needed by users?
- Will classes or individual tutoring work best?
- What operating hours make sense, daytime, evenings, weekends?

Many of the CTCs in Seattle are not being used to their full capacity. The following are successful practices used to increase the number of users at the centers:

- Word of mouth – encourage users to bring their friends to the CTC.
- Distribute flyers to local businesses, churches, and other non-profit service centers in your neighborhood.
- Make announcements about the CTC at neighborhood meetings and celebrations.
- Form partnerships with agencies and organizations that bring their own participants with them.
- Develop particular programs designed to draw in certain groups (for example teenagers or non-native English speakers).
- Deliver what you promise! If users come to the Center for a class or open access time and find the center closed, they will be less likely to try again.

When **Horn of Africa Services** began operating its CTC only a few students showed up for the first class. The instructor told them to "go out, and tell your friends about this, and bring three of them back with you." The students did this and since that time there has been no shortage of students.

CORNERSTONES
Outreach, Participant Recruitment, and Community Involvement

- **Anticipate changes in demand**: While many CTCs in Seattle are not being used to their full capacity, some have waiting lists. To reach and maintain adequate use rates, CTCs must demonstrate a willingness to make changes in program offerings, offer flexible operating hours, and pay specific attention to forms of outreach that target user populations will respond to.
- **Develop a marketing plan and implement it**: CTCs are most effective in reaching potential users when they design programs with their target audiences in mind, determine how best to reach them and invest in making sure they get the word.

LOOKING FORWARD TOWARD SUSTAINABLE FUTURES

The strategies and practices highlighted in the foregoing discussion demonstrate how CTCs have been successful so far in sustaining their operations. The strategies show how Community Technology Centers have best been able to respond to funding constraints and opportunities given the current needs of their target population. These strategies might best be described as forming an "opportunistic" approach, where (as one CTC manager put it) individual centers "scratch and get by," acknowledging some common points that only occasionally form the basis for alliances.

However, if we return to our earlier definition of sustainability – restructuring for resilience, needs-focused, future-oriented – it is appropriate to ask about the long-term consequences of continuing to operate indefinitely with this opportunistic approach. In the face of more limited future resources, we should be concerned about whether individual centers "scratching and getting by" will result in sustained access to digital technology and training to the folks who need it most.

Taken together, we believe the "Cornerstones" presented in this report provide a checklist of healthy activity. Each center will have its own distinctive operational approach, but sustained success requires attention to all of these operational elements.

Modeling Successful Centers – Bringing the Elements Together

Thus, an alternative to the "opportunistic" approach emerges from our conversations with CTC Coordinators. This alternative is not a single prescription, a one-size-fits-all solution. However, there is reason to speculate that sustainability on a metropolitan scale requires CTCs, their funders, and other partners to build on the resources already in place, and think strategically about how to use these resources more effectively without compromising the individual centers' ability to adapt their operations to the needs of those who form their core constituencies. There can be benefit for both stronger, better endowed organizations and smaller, lower capacity organizations.

Whether it has four workstations or twenty-four, whether it is operated as part of a multi-service facility or a stand-alone technology center, operating a CTC has certain fixed costs associated with all of the operational elements discussed in the main body of this report. As the number of centers increases, so does the total amount of resources spent to cover these fixed costs. If resources are finite, it makes sense, in principle, to look for opportunities to reduce the fixed costs associated with center operations, and thereby improve the chances that any particular center will become financially sustainable.

One way to reduce fixed costs is for CTCs to work together in at least some of these operational areas. Working together also has the virtue of being attractive to funders who favor systemic solutions, aiming for organizational efficiencies and coordinated strategies that increase effectiveness, reduce duplication of services, provide professional mentorship, and ensure programs reach needy populations.

But under what circumstances should centers seek to work together to enhance sustainability? Under what circumstances will they likely work together? These questions are difficult to answer in the abstract, and have led us, in turn, to develop a series of more concrete models, or at least "ideal" approaches to sustained service delivery and public access that involve varying degrees of pooling resources.

No single model is, by itself, superior to the others. And none of these models actually exists in its pure form in the real world, although operations at many centers involve at least some of the key strategies associated with them. The following models are intended to spark a conversation among the City, CTC managers, and funders about the likely impact on the sustainability of individual CTCs that would result from moving towards

one or another of the following organizational models. The first two, "Enterprise" and "Service," represent individual center models for funding. The "Affinity Group" and "Association" models present consortium opportunities for fund development as well as services. Organizations falling into the "Enterprise" and "Service" models could also participate in the consortium enterprises.

Pure Enterprise Model: (Revenue Generating)

- Individual centers operating independently, sustaining themselves through a combination of fund-raising, user fees for access, training services, use of space by third parties, and other revenue generating services

Pure Service Model (Third Party,- Not User-Financed)

- Individual centers operating independently, sustaining themselves through fund-raising efforts (can be annual fund or capital campaigns/endowment-building efforts) so that users receive a 100% subsidy of costs for access and training

"Affinity Group" Model

- Small clusters of 3-6 centers (clusters can be based on local geography or similar service populations). The individual centers in an "affinity group" deliver services, do some outreach and fund-raising on their own, but rely on a central umbrella organization for major fund-raising, purchasing, volunteer recruitment, technical assistance, and public education.

"Association" Model

- A larger voluntary association, perhaps encompassing many centers throughout a metropolitan area, which emphasizes building access- and service-related brand identity; centralized assistance for training, volunteer recruitment, smaller "affinity groups" of managers to assure consistent record-keeping; smaller "affinity groups" may be encouraged within the Association, based on similarity of more encompassing mission for organizational operators; allows a group of corporate sponsors to band together to support one set of centers and identify more closely with outcomes.

The following table briefly compares and contrasts operational elements that might be associated with each of these conceptual models.

Operational Features of Four Ideal Types of CTCs

			Cooperative Models	
	Pure Enterprise	**Pure Service**	**Affinity Groups**	**Association**
Management and Administration	Full complement of staff needed at each CTC for planning, record-keeping, fund-raising, facility maintenance, programs, outreach	Full complement of staff needed at each CTC for planning, record-keeping, fund-raising, facility maintenance, programs, outreach	Potential for division of labor among 3-6 CTCs in a cluster, shared professional development, cooperative purchasing of services	Potential for division of labor among large number of CTCs; shared professional development, cooperative purchasing of services
Programming and curriculum	Individual CTCs completely responsible	Individual CTCs completely responsible	Potential to share specialists with carefully-targeted skills, resources, sensitivities	Potential to share specialists with carefully-targeted skills, resources, sensitivities
Fundraising and Resource Development	Individual CTC completely responsible for planning and implementing fund-raising activities	Individual CTC completely responsible for planning and implementing fund-raising activities	Potential for division of labor among 3-6 CTCs in a cluster; more complex; potential for larger impact	Potential for division of labor, decreased capacity to make persuasive case for specialized user needs
Partnerships	Independent partner development; relatively light reliance on partnerships to extend or substitute for in-house resources, unless earned income can be retained for CTC operations	Independent partner development; Very heavy reliance on partnerships to extend or substitute for in-house resources	Development based on affinities and program focus. Cluster-mates substitute for some partners; opportunity to extend any one individual CTC's resources by taking advantage of cluster-mates' partnering history	Large strategic and piggybacking opportunities. Association members substitute for some partners; opportunity to extend any one individual CTC's resources by taking advantage of members' partnering history
CTC Networking and Potential Resource Sharing	Individual CTCs completely responsible	Individual CTCs completely responsible	Potential to share technical specialists and enhance resource development efforts	Potential to share technical specialists and enhance resource development efforts, but with diverse association members, decreased attention on association's part to any particularly specialized user needs
Facilities and Equipment	Individual CTCs completely responsible for assuring adequate access, maintenance and upgrades	Individual CTCs completely responsible for assuring adequate access, maintenance and upgrades	Potential discounts for volume supply purchases; standard configurations and pooling demand for tech support may increase level of support and decrease cost	Potential discounts for volume supply purchases; standard configurations and pooling demand for tech support may increase level of support and decrease cost
Outreach, Participant Recruitment, and Community Involvement	Individual CTCs completely responsible	Individual CTCs completely responsible	Potential to build "brand" identity to attract users; coordinated program offerings possible	Potential to build "brand" identity to attract users; coordinated program offerings possible

We see two potential uses for these models. At the scale of individual CTCs, we would like to see CTC operators and their users explore together the risks and benefits associated with one or another of these models. In other words, what might a community technology center gain in the way of enhanced training, access, and operational efficiency by forming and actively participating in an "Affinity Group" (or more encompassing "Association")? What might be lost or diminished?

Funders and CTC staff might consider the implications of the pure enterprise and pure service models for CTCs located in low-income neighborhoods and designed to service low-income populations. Can such CTCs be expected to generate significant revenue from their services and still serve their intended users? If not, then how can these organizations respond to donor and government warnings not to become "too dependent" on grants? Can a solution be found that provides assured baseline support and enables CTCs to reach further towards their program services potential?

At the city-wide scale, we would like to see public and private partners also explore the risks and benefits associated with moving away from relying too heavily on the current opportunistic, atomistic approach to resource allocation. This approach has generated a wide variety of innovative approaches to making information technology available to those who would have had access otherwise. However, now that so many CTCs have been established, it is time to consider whether the continuation of this opportunistic approach, one which requires a duplication of effort at so many levels, is the best approach for the future.

Appendix A: Sites

Community Technology Center Interviews

Community Technology Center	Canvass Interviews	Follow-up Interviews
Ballard Family Services	1/31/02	3/21/02, 4/1/02,
Chinese Information Service Center	1/29/02	4/11/02
Emerald City Outreach	2/4/02	3/28/02
Garfield High School	2/27/02	3/4/02, 3/27/02
High Point Community Ctr	2/11/02	4/3/02
Horn of Africa Services	1/23/02	3/27/02
Jubilee Women's Center	1/31/02	3/28/02, 4/2/02
Martin Luther King Apts	2/6/02	3/26/02
NewHolly Campus of Learners	2/7/02	4/08/02
Rainier Community Center	2/14/02	4/3/02
Real Change	1/20/02	4/1/02
Rotary Boys and Girls	2/6/02	4/2/02
West Seattle Senior Center	2/4/02	4/1/02
Yesler Terrace Learning Ctr	2/6/02	4/08/02
911 Media Arts	1/31/02	4/11/02
Bryant Manor Computer Learning Center	2/8/02	
El Centro de la Raza	2/1/02	3/5/02, 4/8/02
Phinney Neighborhood Association	1/29/02	
Powerful Schools	2/12/02	
Rainier Vista Job Resources Center	1/28/02	2/1/02
STAR Center	2/6/02	
Technology Access Foundation	2/12/02	
Talmadge Hamilton Senior Center	2/4/02	
Union Gospel Mission	2/11/02	
Tigray Community Association	2/13/02	

Appendix B: Selected Background information Resources

Breeden, Laura et. al. *Computer and Communications Use in Low-Income Communities: Models for the Neighborhood Transformation and Family Development Initiative*. A Report prepared for the Annie E. Casey Foundation. http://www.ctcnet.org/casey/index.htm.

Chapple, Karen, Matthew Zook, Radhika Kunamneni, Anna Lee Saxenian, Steven Weber, Beverly Crawford. 2000. *From Promising Practices to Promising Futures: Job Training in Information Technology for Disadvantaged Adults*. Report prepared for the Ford Foundation by the Bay Area Video Coalition. New York: The Ford Foundation.

City of Seattle. 2000. Technology Matching Fund Final Reports.

- Digital Promise
- Ethiopian Community Computer Resources Center
- Grassroots Technology Projects
- High Point YMCA
- Horn of Africa Services
- Phinney Neighborhood Association
- Seattle Community Network Association
- Tallmadge Hamilton House
- Technology Access Foundation
- Washington State Neighborhood Networks Consortium
- West Seattle Senior Center

Chow, Clifton, Jan Ellis and Geoffrey Walker. 2000. Evaluation Toolkit. http://www.ctcnet.org/evalkit.doc

Chow, Clifton, Jan Ellis, Geoffrey Walker and Bart Wise. 2000. Who Goes There? Longitudinal Case Studies of Twelve Users of Community Technology Centers. http://www.ctcnet.org/longrep3.doc

Chow, Clifton, Jan Ellis, June Mark, and Bart Wise. 1998. Impact of CTCNet Affiliates: Findings from a National Survey of Users of Community Technology Centers. http://www.ctcnet.org/impact98.htm.

CIOF Toolkit: CTC Sustainability Checklist. http://www.ciof.org/toolkits/sustain-checklist.htm

CTCNet 1998. *Impact of CTCNet Affiliates, Findings from a National Survey of Users of Community Technology Centers*. http://www.ctcnet.org/impact98/imp98toc.htm

Fowells Linda and Wendy Lazarus. 2001. *What Works in closing the Technology Gap? Lessons from a Four Year Demonstration in 11 Low Income California Communities*. Computers in Our Future. Los Angeles, California. http://www.ciof.org/policy/exec-summary.htm.

Goodsell, Elizabeth Boynton. 1997. Forging Community Links: A Resource Mapping Guide for CTCNet Affiliates. http://www.ctcnet.org/mapping.html

Kadi, Lauren, 2001 America Connects Consortium Regional Development Agendas. http://www.ctcnet.org/regionalagenda.html (also available as Word document).(10/01)

Keyes, Langley, Schwarz, Vidal and Bratt. 1996. Networks and Nonprofits: Opportunities and Challenges in an Era of Federal Devolution. *Housing Policy Debate 7(2):201-29.*

Kingsley, G. Thomas, Joseph B. McNeely, and James O. Gibson. 1997. *Community Building Coming of Age*. Washington, DC: The Urban Institute.

Kirschenbaum, Josh, and Radhika Kunamneni. 2001. *Bridging the Organizational Divide:Toward a Comprehensive Approach to the Digital Divide*. Oakland, CA: PolicyLink.

Mark, June and Janet Cornebise, and Ellen Wahl. 1997. *Community Technology Centers: Impact on Individual Participants and Their Communities*, Education Development Center, Inc. http://www.ctcnet.org/eval.html

McLaine, Steven. Minority and Low-Income User Satisfaction at Community Technology Centers, (2000) (Word Document). http://www.ctcnet.org/pracfinal.doc

Pane, Natalia, Ivor Mulligan, Alan Ginsburg, Andre Laulanda. 1999. Guide to Continuous Improvement Management (CIM): *For 21st Century Community Learning Centers* US Department of Education.

Pavan, Mary, Review of Materials Pertaining to Youth in the CTCNet Archives (1998-2000).

Penuel, William and Deborah Kim. 2000. *Promising Practices and Organizational challenges in Community Technology Centers*. VStreets Research Group. Center for Technology in Learning. SRI International.

Servon, Lisa J. and Marla Nelson. 1999. *Creating An Information Democracy: The Role of Community Technology Programs and their Relationship to Public Policy*. Report to the Aspen Institute. New Brunswick, NJ: Center for Urban Policy Research, Rutgers University.

Wrixon, Ann. Call for Sustainable Community Technology Centers for All Older Adults. http://www.civicnet.org/comtechreview/community_technology_for_older_a.htm.

In addition, the America Connects Consortium has assembled a range of information, tools, and guides for creating a CTC and building partnerships to help sustain them:

Starting a CTC: Guides to developing a business plan, setting up a center, and engaging users and funders in the community

Sustaining a CTC: How to cultivate funds, goods and services, volunteers, and community support

Capacity Building: Improve your organization through board and staff development, good management practices, and effective planning

Partnerships: How to form mutually beneficial partnerships within and across sectors

Technology: Up-to-date information on hardware, software, and services for community technology

Disability/Inclusion: How to optimize the accessibility of your center for all users

Education: Program ideas, activities, and curricula for every level and every interest

Workforce Development: Effective approaches to training and supporting new workers and career-changers

Economic Development: Helping center users become entrepreneurs and build assets

Program Design: Improve your ability to develop, deliver, and assess programs

Digital Divide: All about equitable access to information technology

APPENDIX C: DATA CODES

SITE

Type
Non-Profit Social/Multiple Service Agency
Public Housing
Subsidized Low Income Housing
Public Community Center
Mutual Assistance Center
Faith-Based Organizations
Family Center
Public School
Stand-Alone Technology Center
Location
North Seattle
Central District
Downtown
International District
Southeast Seattle
West Seattle
Other

USERS

Geographic Distribution
Language Group
Age Group
Gender
Ethnic group (African American for example)
Lab Uses (e.g., What do they use the lab for? - Open lab vs. lessons, homework, games, recreational surfing, job search, letter writing, email)
Usage Documentation (e.g., how is usage documented?)
Relationship between supply of computer time/classes and demand
Mission Fit (e.g., organization's overall mission, CTC consistency with mission, how does the organization measure the success of its CTC activities?

SERVICES

Services offered (e.g., curriculum, open access, non-tech services)
Operations planning / implementation
Public space v. classroom "culture"
Hours of operation
Service Providers (e.g., who provides services - volunteers and staff availability and capabilities)
Volunteers (recruitment, management, training, screening, retention)
Staff (recruitment, management, training, screening, retention)

OUTREACH

Outreach activities
Outreach target populations

FACILITY

Space configuration
Hardware / Software / Internet Capacity
Non-English accommodation
Disability accommodation
Technology Planning (who monitors, how are upgrade decisions made)

FINANCES AND PARTNERSHIPS

Current Funding Sources
Business Planning and Accommodating Uncertainty
Partnerships

COMMUNITY INVESTMENT

Community investment indicators
Community investment levels

SELF ASSESSMENT

Indicators used
Frequency implemented
How established
Need for Technical Assistance in conducting
Continuity and Change Over Time

Oversight [Does anyone keep on top of this (e.g. sometimes people say that the info is tracked, but it is not clear if it is ever analyzed, and if it is, its not clear who possesses this knowledge.)

EMPOWERMENT

PROBLEMS AND SUGGESTIONS

APPENDIX D: LOCAL RESOURCES FOR CTCs

1. Funders List

1. Seattle Community Technology Alliance: http://www.cityofseattle.net/tech/scta/ (soon to be: www.seactc.org)
2. Women's Funding Alliance: http://www.wfalliance.org/
3. Seattle Foundation: http://www.seattlefoundation.org/
4. King County Arts Commission:http://www.metrokc.gov/exec/culture/aboutarts/index.htm
5. Seattle Arts Commission: http://www.cityofseattle.net/arts/
6. City of Seattle Neighborhood Matching Grants Program http://www.ci.seattle.wa.us/don/basic.htm
7. King County Awards and Grants: http://splash.metrokc.gov/topics/awards-grants/AWDtopic.htm

Funding Resources at the Seattle Public Library

8. Paper directory: ***Philanthropy NW Member Directory***, Issue 2000-2001 5th Edition. As of May 2002, the Library is in the process of acquiring the corresponding electronic database.
9. **Charitable Trust Directory** - Office of the Secretary of State, Washington 2001-2002.

These resources are available at the Business Government Desk at the Seattle Public Library Location in downtown Seattle (3rd Floor). For additional information, a Foundation Specialist is available to answer queries and assist.

Benling Wong: Foundation Specialist at the Library Business Government Desk (206) 386-4645, She can assist with researching databases such as Membership to the Foundation Center, Foundation Subject library.

2. Websites for Paid Volunteer Organizations

Americorps*VISTA in Seattle: http://www.nationalservice.org/stateprofiles/wa_intro.html,

How Can My Agency get AmeriCorps*VISTA Volunteers? http://www.friendsofvista.org/how2bspo.html

Jesuit Volunteers: http://www.jesuitvolunteers.org/

3. Websites for Volunteer Organizations

1. **Fremont Public Association Community Volunteerism**: Volunteers and interns are placed through FPA to help area non-profit agencies. http://www.fremontpublic.org/volunteerism.html
2. Technology Access Foundation: http://www.technologyaccess.org
3. **Fremont Public Association Retired and Senior Volunteer Program**: Volunteers age 55 and older become resource for over 130 area non-profits and community institutions. http://www.fremontpublic.org/rsvp.html
4. **The Idealist Organization's Volunteer Opportunities Search Page**: A comprehensive directory of nonprofit and volunteering resources on the Web: http://www.idealist.org/IS/vol_search.html
5. **Municipal Court of Seattle Probation Services' Volunteer Program**: http://www.pan.ci.seattle.wa.us/seattle/courts/volapp.htm Volunteers include senior citizens, student interns, and professional people interested in the criminal justice field.
6. **Seattle Community Network Volunteers Page**: http://www.scn.org/volunteers/ General Volunteer Information and Opportunities.

7. **The Giving Tree**: http://www.thefoundry.org/~service/organizations/giving.html Offers seniors an opportunity to sustain their sense of self worth by offering a place to participate in the good fellowship of co-workers.
8. **Seattle Public Library Volunteer Center**: http://www.spl.lib.wa.us/volunteer/volunteer.html Volunteers are needed to support a variety of Library activities.
9. **United Way of King County's Volunteer Center**: http://www.uwkc.org/ Volunteer opportunities ranging for a variety of community-based organizations.
10. **CyberVPM.com**: http://www.cybervpm.com/ Web Site on Resources for Volunteer Program Managers and Volunteers (*formerly Sound Volunteer Management and Volunteer Program Management Mini-University)*
11. ***Seattle Volunteer***: http://www.seavol.org/svinfo.html A bimonthly newsletter and website, published entirely by volunteer labor that provides extensive of resources for volunteers or potential volunteers in the Puget Sound area.
12. **VolunteerMatch**: http://www.volunteermatch.org/ An organization that utilizes the power of the Internet to help individuals nationwide find volunteer opportunities posted by local nonprofit and public sector organizations.
13. **Internship Programs**: http://internships.wetfeet.com/Employers.asp Employers can source, screen and hire on this largest internship site on the web.
14. **YWCA**: http://www.ywcaworks.org/programs/ Contact: Brenda McCallon mccallon@ywcaworks.org
15. **Northwest Center**: http://www.nwcenter.org/ Referrals are made to other non-profits and other organizations reciprocate. Contact: Bryan Taylor (206) 691-2583 volunteer@nwcenter.org
16. **University of Washington Carlson Center**: http://depts.washington.edu/leader/ provides volunteer opportunities and internships to local organizations in the Seattle Area. Contact: Michaelann Jundt. (206) 685-2705. This program is independent from the University's Work Study program.
17. **Black Data Processing Associates**: http://www.bdpaseattle.org/ BDPA Seattle Chapter. P.O. Box 28238, Seattle WA, 98118
18. **Seniors in Service to Seattle**: http://www.cityofseattle.net/humanservices/mosc/sis/default.htm Site under Construction
19. **Digital Promise**: http://www.digital-promise.org/ Digital Promise focuses on the needs of residents in low-income, elderly, and disabled housing communities in Washington. 1000 2nd Ave., Suite 2700, Seattle, WA 98104; Tel (206) 287-4484; Fax (206) 587-5113; email: info@digital-promise.org
20. **The City of Seattle Department of Neighborhoods' P-Patch Program**: http://www.ci.seattle.wa.us/don/ppatch/ in conjunction with the not -for- profit Friends of P-Patch, provides community garden space for residents of 44 Seattle neighborhoods.
21. **Associated Recreational Council**: http://www.cityofseattle.net/arc/ provides programs and services to the community and advises the Department of Parks and Recreation regarding programs, services, facilities and operations.

4. College Student Work Study Programs

1. **University of Washington - Work Study Administration**
   172 Schmitz Hall / (206) 685-1985
   E-mail: workstdy@u.washington.edu Contact: Michael Azzato
   http://www.washington.edu/students/osfa/stubook.html#II; Pay rates depend on job position, the UW will reimburse up to 65% of the pay rate.

2. **Seattle Central Community College**
   Valerie Myrick – Program Coordinator, Work Study Tel. (206) 587-3870, email: vmyrick@sccd.ctc.edu; or http://seattlecentral.org/finaid/

3. **Seattle University**
   http://www.seattleu.edu/services/financialservices/contact_us.asp
   Contact: Erin Pearson, Tel: (206) 296-2000; Fax: (206) 296-5755; email: financialservices@seattleu.edu

5. Consulting Organizations Mentioned By Seattle CTCs

1. **N-Power**: http://www.npowerseattle.org/ helping Washington state nonprofits use technology to better serve their communities. Provides a pool of technical interns and volunteers to assist Non-profits in Seattle. Their site includes a wealth of tech tools for non-profits.
   Nickerson Marina Building, 1080 West Ewing Place, Suite 300, Seattle, WA 98119; Tel: (206) 286-8880; Fax: (206) 286-8881

   Project Alchemy: http://www.projectalchemy.org/ Project Alchemy provides direct technology assistance to social justice groups in Idaho, Montana, Oregon, Washington, and Wyoming to help them use information and communications technology confidently and skillfully in pursuit of their goals. Project Alchemy, 1080 W Ewing St, Building C, Seattle, WA 98119, phone/fax: (206) 352-3230

   MGS Consulting: http://www.mgs-us.com/ The MGS Mission is to enhance leadership capacity, successful business practices, organizational health, and connection with the wider community. Our donation policy: In support of our commitment to building stronger communities, MGS donates 5% of all income to local and global non-profits focusing on education, community-building, global change efforts and the environment.
   MGS Consulting, 3227 South Hanford, Seattle, Washington 98144; Tel-fax: (206) 760-1051

2. **Above the Mean**: Contact: Ben (206) 729 2759; ben@abovethemean.com -Web Developer for Non-profit and Profit.

3. **Non-Profit Assistance Center**: http://www.nacseattle.org/ The Nonprofit Assistance Center is training and consulting resource for Non profits in the Seattle area to assist them in developing skills they need to achieve their missions. They provide culturally competent training and mentoring for organizations' staffs and leaders. Priority is given to organizations that are led by and serve low income communities and communities of color, and to small and emerging organizations, organizations in transition, and organizations that have less access to traditional sources of funding.

   The Nonprofit Assistance Center, 1825 South Jackson Street #101 Seattle, WA 98144; Tel: (206) 324-5846; Fax: (206) 324-6423

APPENDIX E: FORM 1: PROGRAM PLANNING AND EVALUATION FORM

Ballard Family Center

Program Planning and Evaluation Form

Title of Program/activity: _____

Brief description: _____

_____

_____

Which of the BFC goals is this activity most closely related to? _____

_____

Which BFC core funders' or specific grantors' expectations does this activity meet?

_____

Dates and times:_____

Instructor, facilitator, event coordinator:_____

Is this person a volunteer, BFC staff, partner agency staff, or outside paid person?

_____

Name of BFC designated coordinator for event:_____

What resources do you estimate it will take to plan and conduct this event, program, or class?

BFC staff time (who, how much):_____

BFC space (which rooms and other facilities will be used):_____

_____

BFC equipment and supplies needed (computers, office supplies, kitchen supplies):

What, if anything, needs to be purchased especially for this activity?

_____

How will the cash costs of this activity be funded? (e.g., BFC core funders, fees, project specific grant, other):

____

____

What is the projected participation in this activity (who, how many)?

____

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Post-event evaluation

(to be completed by instructor, facilitator, event coordinator)

Was the event, class, or activity held as planned? ____________________

If event was not held, what was the reason?________________________

Who attended (total number, adults and children, ethnic diversity, etc.)?
____

Compare actual resources used with those projected to be used (staff time, cash costs, existing supplies)

BFC supplies and equipment:____

FFC staff time:____

Cash Costs:____

If fees were charged, how much was collected?________________________

If the BFC were to offer a similar class, event, or activity in the future, what would you do differently?

FORM 2

GARFIELD TECHNOLOGY

WEEKLY REPORT

Week of February 2 -February 8, 2002

Weekly Review

This week Goichi continued to promote the lab with word of mouth and paper handouts advertisements. He extended his efforts to Providence Hospital. We reconstructed our bulletin board and we are also putting together a display of black historical figures on our door in collaboration with Kids Place and Key Project's After School Programs. Unfortunately, we had a major problem with one of the computers. Bob is taking the computer home over the weekend to work on it.

Participants

- 96 individuals came in for Open Lab
- 1 new individual
- 20 students from the After School Program
- 6 students for Computer Basics (Wednesday)
- 5 students for Computer Basics (Thursday)
- 5 students for Intro to Computers (K-6)
- 3 students for PowerPoint II

Classes & Training

We offered the following classes and training this week:

- After School Program
- Computer Basics
- Introduction to Computers (Grades K-6)
- PowerPoint II

Volunteers & Employees

Volunteers and Employees consisted of:

- One volunteer who monitors the lab Tuesday from 4-8
- One volunteer who monitors the lab Fridays from 4-8
- One volunteer who monitors the lab Saturdays from 9-12
- One volunteer who monitors the lab Sundays from 12-4
- Five UW Service Learning participants:
  - One Web Page Developer
  - Two Lab Monitors
  - Two Instructors
- Two UW work study students
  - Supervised the lab and after school programs
  - Coordinated volunteer project
  - Acted as interim Teen Life Center Lab Supervisor
- One intern from BCC developed marketing strategies for the computer lab
- One intern from BCC served as on-site technical support

FORM 3

SEATTLE COMMUNITY TECHNOLOGY ALLIANCE

NEW USER PROFILE

Date: ____/____/____

First Name _____ Middle Initial _____ Last Name _____

Street Address _____ City _____ State _____ Zip Code _____

( ) Phone _____ E-mail Address _____

(May we contact you to participate in a computer lab survey?) ☐ Yes ☐ No

☐ Male ☐ Female Birth date ____/____/____

What is your race? (Mark ☒ one or more races to indicate what you consider yourself to be.)

☐ White
☐ Black or African American
☐ Other African descent (Please specify)
☐ Hispanic (Please specify)
☐ Latino/Spanish (Please specify)
☐ American Indian or Alaska Native (Please specify)

☐ Asian Indian
☐ Chinese
☐ Vietnamese
☐ Korean
☐ Other Race (Please specify)
☐ Japanese
☐ Filipino
☐ Other Asian (Please specify)
☐ Native Hawaiian
☐ Samoan
☐ Other Pacific Islander (Please specify)

What language(s) do you speak at home? _____

Is anyone in your household participating in any of the following programs:

TANF, Headstart/ECAEP Preschool, WIC, and/or Employment Programs ☐ Yes ☐ No ☐ Not Sure

Other _____

Do you have a disability that may hinder your ability to use the lab? If yes, please explain. ☐ Yes ☐ No

How did you hear about this computer lab?

☐ Friend
☐ Family Member
☐ Employer
☐ Agency (YWCA, PIC, etc.)
☐ Recreation Center
☐ Faith-Based Organization
☐ Public Library
☐ School
☐ Flyer
☐ Newspaper
☐ Radio
☐ Other _____

Check the box that best describes your current student status:

☐ Elementary (Grades K-5)
☐ Middle School (Grades 6 - 8)
☐ High School (Grades 9 - 12)
☐ Not a student
☐ GED/ABE Student
☐ College or Graduate Student
☐ Technical or Vocational Student

If you checked off *not a student* in the previous question, how far have you gone in school?

☐ Some High School
☐ High School Diploma or GED
☐ Some college
☐ College graduate
☐ Other (Please specify) _____

Are you employed? ☐ Yes ☐ No ☐ Full-time ☐ Part-time

Revised 2001-04-24

Computer User Policies

Welcome to the Ballard Family Center. We are pleased to be able to offer these computers for public use. Please read the following guidelines, initial each section, and sign at the bottom.

General Policies

- Sign in when you begin, and sign out when you leave.
- Time Limit is **one hour**, per day.
- You may print two (2) copies per day free. If you print more than two copies, the price is $.10/per copy. Please pay at the front desk
- Staff are not always available to help with computer related questions, so you may want to attend one of our computer classes. General computer instruction is available in both drop-in and classroom modes. The schedule is in our newsletter; the current issue is available at the front desk.

Initial here if you have read and understood the general policies:

What is permitted:

- Normal use of Word, Excel, Access, Publisher
- Web browsing
- Printing of documents from above applications
- Audio/video (from CD-ROM only, no downloads)
- Online Games (no downloads)

Initial here if you have read and understand what is permitted:

What is not permitted?

- NO food or drink allowed in the computer lab
- NO program installations of any kind whatsoever
- NO streaming audio or video ever, for any reason (Real Audio, Napster, MSNBC news clips, etc)
- NO adjustments of ANY permanent (i.e. default) settings on the computer
  – not even desktop settings
  NO booting to DOS
- NO objectionable web page viewing: pornography, hate groups, etc.
- NO "Instant Message" software of any kind (AIM, ICQ, etc)
- NO hacking of any sort
- NO illegal use of the computer in any way
- NO chat rooms
- SAVING: Files must be saved onto a diskette. If you need a disk, request one at the front desk. No documents may be stored on the computer. *Ballard Family Center accepts **no responsibility** for any files saved on our computers!*

I have read and will adhere to the computer use guidelines described above

Name (Please print) _____ **Date**

Signature _____